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ABSTRACT

Three themes have dominated the sociology of education: the sub-cultural thesis, the socio-cultural advantage thesis, and the biogenetic thesis. With regards to the last, one should try to account for differences in the behavior of identifiable social groups by looking for social causes. The relationship between the strength of the bonds attaching youths to social groups and the development of academic competence was investigated using data selected from a comprehensive study of a sample of 4077 drawn from the 17,000 secondary school students in western Contra Costa County in the spring of 1965. The social groups taken as salient in the environment of youths are the family, the peer group, the school, and the student's perception of the society as a whole. The Hemnon-Nelson group IQ test was the criterion measure. The large disparities of some 15 IQ points between the off-spring of professional and of lower-class parents, and between blacks and whites are entirely interpreted by the set of intervening environmental variables. (JM)

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SOCIOLOGICAL PERSPECTIVES ON THE DEVELOPMENT OF ACADEMIC COMPETENCE IN URBAN AREAS*

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Two major themes have dominated the sociological interpretations of variations in academic competence between social groups. One might be called a theory of socio-cultural differentiation, emphasizing the differences in beliefs, values, aspirations, and outlook between social groups; the skills and talents which are peculiarly esteemed and nourished; and the differences in information, vocabulary, and concepts which are learned and transmitted in groups which are, to some degree, insulated from one another. The other emphasis is upon socio-cultural advantage (or "disadvantage", as we are wont to focus upon what seems a "problem"). In this view, academic competence--particularly verbal abstract reasoning which is so important to our school curricula--is conceived as a more-or-less unidimensional hierarchy. The intellectual quality and demands of the social environment of a youth--in the family, among peers, and in the school--may facilitate or impede the development of competence. It is not that different competencies are engendered in different environments, rather environments have unequal quality for nurturing intellectual growth.

Without intending a thorough review of the numerous studies reflecting these two themes, let me mention just a few. An early focus which might be called "sub-cultural" was upon the diverging values of social classes which would seem to lead to inequal success in school. Innumerable articles in this genre might be mentioned: for example Herbert Hyman's (1953) "Value Systems of Different Classes...," and Joseph Kahl's (1953) "Educational and Occupational Aspirations of 'Common Man' Boys." Richard Hoggart's (1957) book, "The Uses of Literacy" describing the culture of

working-class life in England further emphasized the non-mobile and anti-educational values of the stable working class--as did Bernard Rosen (1956) in "The Achievement Syndrome." In "The Adolescent Society" James Coleman (1961) makes the case that the culture of a peer-group defines the kind of behavior which will be rewarded: where athletic prowess is esteemed the most able youths will invest their energy in sport. Even earlier the now "classical" lecture by Allison Davis (1948), "Social-Class Influences upon Learning," emphasized the differences between groups in experiences and familial socialization. This emphasis, of course, led to the effort to devise "culture fair" tests.

On the other hand, works such as Patricia Mayo Sexton's (1961), "Education and Income" and James Coleman's (1966) more recent report on "Equality of Educational Opportunity" underline the inequality of environmental advantages. Basil Bernstein's (1961) socio-linguistic hypothesis which has been so influential upon many American writers clearly suggests a uni-dimensional hierarchy of cognitive skills--with all the advantage going to the middle-class child with a command of "formal language" which permits flexible permutations and individualization of meaning; while all classes, he affirms, have access to "public language" which depends upon a community of tacit common understandings and values. Vera John (1963, 1964) and Suzanne Keller (1963), in their studies of the verbal development of slum children have contributed to this thesis.

These two emphases are not, of course, antithetical at all points: a difference between sub-cultures can be an advantage to only one in a society offering a monolithic structure of rewards. The concrete and

meticulous learning style which Frank Reissman (1962) points to as a hidden strength of the disadvantaged student remains, nonetheless, a disadvantage so long as schools--and society--reward abstract and facile thought.

The differing emphases emanate in part from the presuppositions and consequent research methodologies of the investigators. Direct observation of the beliefs, values, and behavior of different social groups will lead to a delineation of cultural differences; an inquiry into the determinants of some single measure of academic competence will more likely lead to an assessment of relative socio-cultural advantage.

Yet the distinction I have emphasized is more than a conceptual convenience and an artifact of research choices. Allison Davis (1948), and, more recently linguists such as Labov and Johnson (in unpublished manuscripts), have emphatically reaffirmed the view that "All languages in the world...have...structures sufficiently flexible to express every category of thought which the human being can conceive." (Swadish, 1941; cf. also Sapir, 1939). They have sought to demonstrate this specifically through the analysis of protocols of non-standard English dialects. This is clearly not reconcilable with Bernstein's work or that of others who have emphasized the role of language in mediating thought.

A third thesis for the interpretation of variations in academic competence, which certainly does not originate with sociologists, yet is implicit in the accounts of many and explicit in a few is the <u>biogenetic perspective</u>. A colleague of mine, Professor Arthur Jensen (1969) has recently reviewed and refocused public attention on this

perspective. Even though sociologists, along with cultural anthropologists, have historically been on the environmentalistic side of the old nature-nurture controversy, the biogenetic perspective permeates the writing of influential sociologists. Kingsley Davis and Wilbert Moore (1945) argued for the functional necessity of stratification in order to attract persons of inherent capacity to positions of responsibility and importance.

Most sociologists, I believe it is fair to say, accept the view that performance on an intelligence test is some function--which cannot be too precisely determined--of genetic factors, environmental factors, and their interaction. Some, such as David Goslin (1963), William Sewell (1966), and Bruce Eckland (1967) are inclined to accept the estimates made by Sir Cyril Burt (1966), based upon twin studies, that three-quarters or so of the variance is accounted for by genetic factors; a very few, like Robert Faris (1961) deny any relationship between levels of performance and innate capacities.

But the pervasiveness of the biogenetic perspective among sociologists can best be estimated not from their ideological affirmations but from the format of their cross-tabulations. In cross-sectional studies intended to assess the effect of some environmental factor upon academic performance, it is a rule that an IQ test should be "held constant." In his review of research on "The Prediction of Academic Performance," David Lavin (1965; pp. 22-32) voices an apparent concensus in pointing out that failure to do so vitiates the finding. Clearly this methodological rule rests upon the assumption that performance on the IQ test is predetermined and independent of both the environmental factor and the academic competence being assessed.

I do not wish here to add yet another chapter to the debate which has been filling the pages of recent issues of the Harvard Educational Review, though I will return to it later. The three theoretical perspectives which I believe have explicitly or implicitly dominated the sociology of education for the past several decades--sub-cultural, cultural advantage, and biogenetic--have left a much older sociological theory undeveloped.

Emile Durkheim in his doctoral dissertation (In 1893; pp. 345-347) said:

> There are always beliefs and practices common to men which are not inscribed in their tissues. But this character is more manifest as the social mass and density grow. The more people there are in association, and the more they react upon one another, the more also does the product of these reactions pass beyond the bounds of the organism . . . .To put it in terms of the classical definition, if man is a reasonable animal, that is because he is a sociable animal, ...

Reasoning, according to Durkheim, is imposed upon the intellect as a moral necessity by the social groups with whom he interacts--and it depends upon the "density" of the group and the amount of reaction which takes place within it.

A similar view is expressed in the pithy aphorism of Jean Piaget (1932, p. 404):

> Logic is the morality of thought just as morality is the logic of action.

This emphasis, of course, pervades the social philosophy of George Herbert Mead (1934, p. 195):

> We must regard mind, then, as arising and developing within the social process, within the empirical matrix of social interactions.

All three, Durkheim, Piaget, and Mead, regard symbolic reasoning as a social product. The transition from subjective egocentrism to objective decentration, in thought, as in morality, depends upon a series of social transactions. The concern for proof or logical justification, like the concern for principle or moral justification, develop in interpersonal interplay.

At this level of generality both sub-cultural theory and cultural advantage theory may find intellectual precedents. But Durkheim's stress was not upon the differences in substantive content between groups but upon the density and amount of reaction within groups. It is a theory of social cohesion, not difference.

The stronger the bonds which attach an individual to social groups the more will his thought be governed by logic and his action by morality; the weaker the bonds the less will he recognize other rules of thought or conduct than are required for egocentric action of the moment.

This is not only a different emphasis from sub-cultural and cultural advantage theories; it is at some points antithetical. It suggests, for example, that the more integrated a disadvantaged youth is in his family or in his peer-group the more he will be governed by rules of logic as of morality.

In the area of social morality Travis Hirschi (1969) has directly tested this hypothesis with the interesting finding that youths who are closely attached to lower-class families, or even to delinquent peers, are less likely to commit delinquent acts than youths who are detached. This is clearly inconsistent with the views that delinquency is learned

in a criminal sub-culture or is a simple consequence of economic privation.

Here, however, I wish to examine data which bear upon the relationship between the strength of the bonds attaching youths to social groups and the development of academic competence in an urban area.

The data are selected from a comprehensive study of a sample of 4077 secondary school students in a school district in the San Francisco-Oakland metropolitan area. (See Wilson, 1965 and 1969) The seventeen thousand students attending eleven public junior and senior high schools in western Contra Costa County--across the Bay from San Francisco--in the spring of 1965 constitute the population from which the sample was drawn. This is primarily an industrial area; almost two-thirds of the employed males are manual workers. The proportion of Blacks in the area at that time was about eighteen per cent (Wilson, 1966).

The particular variables which I wish to discuss were mostly gathered in a pencil-and-paper questionnaire in the spring of 1965. These data are supplemented by information transcribed from school records and by the scores from tests administered a year later, in 1966.

As in many social surveys, the operational indicators which are available are crude, and often only indirect surrogates for the conceptual variables they are intended to represent. But the bias which this crudeness introduces does not seem, on the whole, pernicious: it leads to conservative underestimates rather than exaggerations of the relationships.

The social groups which I have taken to be salient in the environment of youths are the family, the peer group, the school, and the student's perception of the society as a whole.

(FIGURE 1 HERE)

are listed

In Figure 1, examples of the kinds of variables which are available to describe, first, the academically relevant quality (cultural advantages) of each group, and, second, to characterize the nature of the bonds which relate the individual to each group. Any one of the variables listed under "social bonds" could be construed as an index of social cohesion, but we can distinguish conceptually between the bonds of attachment, which are predominantly affective, and bonds of commitment which imply the investment of time, energy, and effort into the activities of the group.

For the dependent variable--a global indicator of developed academic competence--Henmon-Nelson group IQ test scores which were administered a year later are used. Since intelligence tests were originally devised to predict school performance, they tap those kinds of knowledge and cognitive and verbal skills which are required and have transfer value in the traditional classroom. Since I will be dealing with two grade levels separately, each of which is fairly homogeneous with respect to chronological age, the conversion from "mental ages" to the IQ ratio makes little difference.

The selection of this measure for a dependent variable does not imply adherence to a uni-dimensional as opposed to multi-factor theory of intelligence: on the contrary the test is viewed as a global multi-dimensional (but heavily verbal) measure of learned academic abilities. But it is a measure of some considerable educational and political importance in its own right. An analysis of some of its socio-cultural precursors may prove to have some spin-off value bearing on the old nature-nurture

controversy which has been rearoused.

(TABLE 1 HERE)

Two sub-samples of the secondary school population were selected to provide internal replication of the relationships to be discussed: the seventh-grade and the tenth-grade classes of 1965 when the questionnaires were administered. In the following year, 1966, the eighth-grade and eleventh-grade IQ tests were administered. In Table 1 you can see that the differences between occupational groups and between Blacks and Whites in both of these samples is very close to analogous differences reported in many other studies--fluctuating about fifteen IQ points or one standard deviation.

This magnitude of difference on almost <u>any</u> indicator of educational attainment has been repeatedly documented in all western societies for social classes, and on the confounded dimension of race in the United States. The effort to interpret these gross disparities by differences in motivation, opportunity, and intellectual quality of the social milieux has been a central topic in the sociology of education.

For the sake of descriptive clarity and simplicity I would like to present a series of tabulations--taking one variable at a time which serves as an indicator of either some quality of a social group or the social bond attaching the individual to the group and showing its relationship to the IQ test scores in the two grade levels.

All of these items are, of course, confounded with one another. One cannot simply add up the "variances explained" in each bi-variate relationship taken separately to see what proportion of the total variance in IQ

test scores has been "accounted for." After a quick review of selected bi-variate relationships, which have primarily descriptive and expository value, a more complex analysis of covariance will be summarized.

Family

"Quality"--

(TABLES 2, 3, 4, AND 5 HERE)

This set of tables, two through five, show the relationship of some frequently-used indicators of "cultural advantage" to IQ test scores. The relationships portrayed are rather well-established.

"Attachment"--

(TABLE 6 HERE)

The item which is here used to indicate attachment to the primary family is the question, "Would your father stick by you if you got into really bad trouble?" Among the seventh-grade students the relationship is clear and monotonic; it is neither strong nor regular among the older age group, though the relationship tends in the same direction.

"Commitment"--

(TABLE 7 HERE)

Here the relationship is considerably stronger--especially among the younger students where you see difference of nineteen IQ points between those who value and those who devalue their parents goals. Interestingly enough this relationship holds up among those seventh-grade students who report that their parents do not pressure them toward higher educational attainment.

Peers

"Quality"--

(TABLE 8 HERE)

Only very indirect indicators of the characteristics of a student's friends were available in the survey since no sociometric device was administered. We did inquire about friends' arrest records, race, neighborhood, popularity, and other items. It seemed that the most likely indicator of the friends' academic performance was the students' perception of his teachers' attitudes toward his friends. This is a rather tenuous chain of inferences, but, in this event, the responses do show a clear relationsh: to the IQ of the respondent. Taken by itself, of course, this might simply reflect an homophyly of attributes--"birds of a feather flock together". But it is also congruent with the interpretation which has been supported in other studies (e.g., Wilson, 1969) and subsequent tables (e.g., Table 11, below) will strengthen, that the academic performance of salient peers serves as a norm--a reference--for individual performance.

"Attachment"--

(TABLE 9 HERE)

Here we find a clear dichotomous relationship. Using respect as an indicator of affective attachment we find those who are attached perform better; those who are detached from their peers perform worse. Again, using the prior variable as a control, this relationship was found to hold up both for those whose friends are liked by teachers (presumably

the academically competent) and those whose friends teachers don't like. This is analogous to Hirschi's finding with regard to juvenile delinquency: the closeness to peers favors reasoning ability regardless of the academic or social status of th peers to whom one is attached. It is the social isolate who, on the average, is less competent.

This raises a methodological question about the kind of forced-choice question which is often used to assess the relative salience of cross-cutting reference groups. This form of question, "Whose disapproval would concern you most if you should be (for example) caught stealing: your parents, your friends, or your teachers?" implies a zero-sum game. In my data I have found that the strength of bonds to various groups are positively associated. Strong attachments to parents are associated with strong attachments to peers. It is the detached individual who is more likely to be morally deviant and intellectually retarded.

"Commitment"--

(TABLE 10 HERE)

The relationship between the amount of time invested in interacting with peers and IQ provides a clear confirmation of the foregoing discussion of the association of attachment and reasoning. Except for a slight curvilinearity involving very few persons at the extreme end of the distribution--perhaps a law of diminishing returns--the more time spent in informal conversation the higher the level of academic competence. To hearken back to the earlier analogy, as Mead and Piaget emphasized the importance of play for the development of a non-authoritarian morality, so "rapping" is conducive of non-authoritarian reasoning. The informal unstructured conversation among peers, whether the topic be sex

or people or politics or fantasy involves an almost continuous process of analysis and intellectual justification.

School

"Quality"--

(TABLES 11, 12, AND 13 HERE)

Turning to the quality of the school we are once again on well-plowed terrain. In Table 11 showing the relationship between the proportion of lower-class children in the students' prior elementary school and his subsequent performance on an IQ test we have a finding which has been made widely known by the Coleman Report (1966) as well as some earlier studies of mine (Wilson, 1963 and 1969) on consequences of segregation.

Let me not elaborate here except to say that while the relationship is quite well documented, there still is, in my mind, some uncertainty concerning its interpretation. Many authors have evoked a sub-cultural thesis suggesting that different values placed upon academic success modify the aspirations and performance of individuals subject to this influence. However this contextual effect could well operate upon the instructional process more directly: the proportion of time devoted to instruction and study rather than behavioral control and non-academic activity is associated with the modal performance of the class, as are teacher standards and expectations. A clearer unravelling of these classroom processes is needed.

In Table 12 a much more direct assessment of the intellectual norms of the prior elcmentary school is used--the average IQ of each student's

classmates (excluding his own prior IQ) when he was in the sixth grade. The relationship is, as would be expected, much sharper than when using social class to characterize the elementary school. There is a degree of circularity in this relationship, however. Insofar as an individual's classmates in the sixth grade accompany him into the eighth and eleventh grades, the part-whole correlation which inflates the constancy of individual tests over time also leads to some degree of spurious inflation of the association shown here.

Since teacher expectations and student performance undoubtedly have a reciprocal relationship over time, either an experimental study or an analysis of longitudinal data with repeated measurements would be required to clearly establish the causal order in the relationship shown in Table 13. Since here the perceptions of teacher expectations are expressed a year before the performance test, the data are congruent with the thesis which Professor Rosenthal (1968) has put forward. Yet, in this case, these expectations could be based upon prior student achievements.

"Commitment"--

(TABLE 14 HERE)

Commitment to school might be represented by many variables. Time spent on school work would seem a likely candidate except that the successful student need devote little time to it and the unsuccessful student is often forced to devote a great deal. In Table 14 I take the rather obvious index of educational aspirations.

Society

In conceptualizing the nature of the social bonds which may attach

a youth to the society as a whole it is his perception of his stake in the future, the structure of opportunities which the society may offer, and the relevance of present effort--particularly academic effort--to future rewards, which seems most relevant. Considerable prior research has shown the motivational potency of future orientations. (E.g., Turner, 1964.)

"Quality"--

(TABLE 15 HERE)

Of considerable relevance to one of our initial disparity in performance between Blacks and Whites is the anticipation that racial discrimination will block occupational mobility anyhow--thus negating the supposed instrumental value of effort in the educational domain.

"Commitment"--

(TABLES 16, 17, 18, AND 19)

Here we have a series of MMPI-type items which are frequently used in social and psychological research in scales of "future orientation", "ambition", "mastery-fatalism", and "anomie". I have selected single items from each of these scales. In each case, in both age groups, we have clear and strong relationships in the anticipated direction.

Covariance Analysis

As I indicated at the outset, before presenting these individual bivariate relationships, all of the "independent" variables are confounded with one another. Race, occupational status, the various indicators of

the "cultural advantage" or quality of the socializing groups as well as the indicators of social bonds, are correlated with one another. Thus, to some extent, when looking at each relationship separately, we are explaining the same variance over and over again.

In order to estimate the independent effect of each variable we need to (statistically) hold all the other variables constant. "Least squares" multiple regression--in this case, since we have categorical variables, usually called analysis of covariance--provides an efficient and well established procedure for estimating the magnitude of the individual effects as well as for testing the null hypothesis. (See Wilson, 1969, pp. 79-83 for a discussion of the model.)

(TABLE 20 HERE)

Table 20 is a summary of the analysis, I should mention that here several of the variables are scales consisting of the summated scores of two or more items which were represented by single items in the foregoing illustrations.

Looking in the bottom row of this table you see that the multiple correlation between IQ and the entire set of variables is .76. Fifty-eight per cent of the variance in IQ test scores is accounted for.

Notice that the last three variables: family size, occupational status, and race do not attain statistical significance. The large disparities of some fifteen IQ points between the off-spring of professional and of lower-class parents and between Blacks and Whites are entirely interpreted by the set of intervening environmental variables. This should go some way toward meeting Professor Jensen's complaint (1969, pp. 82-83) that "no one has yet produced any evidence based on a properly

controlled study to show that representative samples of Negro and White children can be equalized in intellectual ability through statistical control of environment and education."

I realize that a staunch advocate of a biogenetic perspective will not be satisfied that the data and argument here are compelling. It could be argued that some of the variables which I have taken represent environmental and cultural influences upon the students--such as fathers' education or the students own ambition--are themselves determined by genetic factors. I would tend to agree that a truly compelling refutation of the biogenetic explanation of differences in the performance of different social groups would have to be experimental: it would entail the obliteration of all factors which define them as distinguishable social groups. (Or perhaps we should pursue Professor Stinchcombe's whimsical suggestion to apply for a large research grant to retire to a well-integrated South Sea island and wait to accumulate a sufficient sample of identical twins--one of each pair being black and the other white--so that we could estimate the environmental effect of race while being assured of genetic identity.)

More seriously I would suggest that this analysis does shift the burden of empirical demonstration to those who would argue that either status distinction or racial disparities in performance are based upon assortative mating within differentiated genetic pools.

Summary

I have reviewed three themes which have dominated the sociology of education: the sub-cultural thesis, the socio-cultural advantage

thesis, and the biogenetic thesis. With regards to the last I would argue (as did Durkheim) that in trying to account for differences in the behavior of identifiable social groups we should look for social causes. With regards to the socio-cultural perspectives I have suggested that we might enrich our understanding by elaborating and updating the theory of social integration or social control which has deep roots in the history of social thought.

The analysis I have presented here is quite provisional, although I believe a prima facie case is made for the warrantability of the thesis. To the extent that the thesis may be true it raises some questions about our presuppositions in educational practice in urban areas.

For example, educators have often been morally hung-up over whether they had the right to wean lower-class youths from their parents by indoctrinating them with middle-class values. If this social cohesion thesis is correct, if educators could succeed in damaging family solidarity they would interfere with intellectual development. Similarly I would question the desire of many adults to interfere with informal peer relations. While I would not advocate radical policies on the basis of these tenuous findings, we should be plagued by healthy doubts.

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Figure 1. Variables indicating the socializing quality and the bonds of attachment and commitment to salient groups in the environment of youths

Group	Indices of Quality	Social Bonds	
		Attachment	Commitment
Family	Cultural advantage	Trust	Emulation
	Parental attainment	Affection	Cooperation
Peers	Academic attainments	Loyalty	Time spent with peers
	Values of peers	Respect	Approval of activity
School	Academic status	Importance	Educational aspirations
	Teacher characteristics	Respect	Effort
Society	Perceived opportunity	Fatalism	Ambition
	Perceived discrimination	Anomie	Future orientation

Table 1. Mean Henmon-Nelson IQ test scores in the eighth grade and in the eleventh grade, of students sampled in the seventh and tenth grades, by parent's occupation and by race

Classification	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Parent's occupation				
Professional and managerial	(81)	110	(72)	110
White collar	(132)	106	(142)	103
Working (journeymen and semi-skilled) . .	(163)	100	(162)	101
Lower (unskilled, unemployed)	(233)	97	(167)	93
Race				
Black	(281)	92	(201)	88
White	(287)	106	(317)	103
Total sample	(609)	102	(543)	101

Table 2. IQ by father's education

"How much education does your father have?"	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Some high school or less	(169)	98	(197)	96
Graduated from high school	(183)	102	(159)	101
Trade or business school	(35)	99	(30)	103
Some college or junior college	(99)	105	(62)	102
Graduated from a 4-year college	(118)	108	(77)	112

Table 3. IQ by object in the home

"At your home, is there a map of the United States?"	Eighth Grade Sample Number	Eighth Grade Mean IQ	Eleventh Grade Sample Number	Eleventh Grade Mean IQ
Yes	(522)	103	(508)	102
No	(141)	94	(64)	88

Table 4. IQ by travel

"What is the longest trip you have taken outside your city?"	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Never outside city limits	(23)	80	(12)	95
Bay Area cities	(49)	86	(12)	94
California	(109)	99	(38)	98
Outside California	(474)	105	(368)	103

Table 5. IQ by number of siblings

Number of Siblings	Eighth Grade Sample Number	Eighth Grade Mean IQ	Eleventh Grade Sample Number	Eleventh Grade Mean IQ
0-1	(135)	107	(138)	103
2	(119)	103	(121)	103
3	(120)	103	(83)	101
4-7	(207)	98	(179)	97
8 or more	(72)	91	(40)	92

Table 6. IQ by closeness to father

"Would your father stick by you if you got into really bad trouble?"	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Certainly	(289)	104	(278)	102
Probably	(150)	103	(121)	101
Maybe	(75)	100	(50)	97
Don't know	(92)	97	(46)	100
I doubt it	(52)	95	(57)	97

Table 7. IQ by commitment to parental goals

"My parents want me to aim for goals which I think are of little value."	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Strongly agree	(58)	91	(27)	89
Agree	(100)	95	(35)	101
Undecided	(209)	99	(124)	99
Disagree	(154)	106	(195)	104
Strongly disagree	(112)	110	(117)	103

Table 8. IQ by teachers' evaluation of peer group

"How much do you think most teachers like the group of friends you go with?"	Eighth Grade Sample Number	Eighth Grade Mean IQ	Eleventh Grade Sample Number	Eleventh Grade Mean IQ
Very much	(103)	106	(99)	102
Fairly well	(246)	104	(222)	103
I don't know	(164)	100	(155)	98
Not much	(88)	96	(46)	98
Not at all	(43)	93	(16)	93
I have no group of friends at this school	(23)	93	(26)	99

Table 9. IQ by respect for peer group

"Would you like to be the kind of person your best friends are?"	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
In all or some ways	(515)	104	(423)	103
No (or I have no friends).	(145)	91	(105)	94

Table 10. IQ by time spent with peers

"How many hours a week do you spend sitting around talking with friends?"	Eighth Grade Sample Number	Eighth Grade Mean IQ	Eleventh Grade Sample Number	Eleventh Grade Mean IQ
None at all	(55)	97	(12)	91
Less than 1	(229)	101	(72)	97
1-2 hours	(195)	102	(138)	100
3-4 hours	(91)	104	(98)	101
5-6 hours	(44)	107	(62)	110
7-8 hours	(10)	118	(27)	107
9 or more hours	(29)	96	(47)	102

Table 11. IQ by social-class character of prior elementary school

Percentage of lower-class schoolmates in elementary school attended	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
0-10%	(126)	110	(68)	107
10-20%	(97)	105	(73)	106
20-40%	(77)	104	(177)	100
40-50%	(220)	93	(75)	92
50% or more	(123)	92	(94)	90

Table 13. IQ by teachers' expectations

"What kind of work do most of your teachers seem to expect from you?"	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Excellent work	(108)	108	(101)	112
Good work	(391)	103	(371)	99
They don't seem to care	(5)	--	(19)	97
Poor work	(171)	93	(179)	93

Table 14. IQ by educational aspirations

"How much schooling would you like to get eventually?"	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Some high school	(32)	91	(7)	--
High school graduation; apprenticeship . . .	(129)	93	(52)	90
Trade or business school	(22)	97	(44)	97
Some college or junior college	(99)	99	(131)	96
College graduation (four years)	(355)	107	(304)	106

Table 15. IQ by anticipation of discrimination

"Do you think that racial discrimination will keep you from getting the kind of job you want to have eventually?"	Eighth Grade Sample Number	Eighth Grade Mean IQ	Eleventh Grade Sample Number	Eleventh Grade Mean IQ
Yes; maybe	(322)	98	(172)	96
No	(298)	106	(343)	104

Table 16. IQ by orientation to the future

"A person should live for today and let tomorrow take care of itself."	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Strongly agree	(152)	97	(49)	92
Agree	(160)	99	(70)	99
Undecided	(112)	101	(64)	103
Disagree	(137)	106	(139)	106
Strongly disagree	(92)	109	(98)	103

Table 17. IQ by ambition

"An easy life is a happy life."	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Strongly agree	(107)	92	(41)	96
Agree	(180)	98	(85)	95
Undecided	(209)	103	(151)	99
Disagree	(108)	110	(171)	106
Strongly disagree	(39)	109	(61)	105

Table 18. IQ by fatalism

"What is going to happen to me will happen, no matter what I do."	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Strongly agree	(68)	97	(37)	98
Agree	(124)	98	(69)	96
Undecided	(230)	102	(91)	99
Disagree	(140)	105	(142)	105
Strongly disagree	(84)	106	(83)	108

Table 19. IQ by anomie

"Most criminals really shouldn't be blamed for the things they have done."	Eighth Grade		Eleventh Grade	
	Sample Number	Mean IQ	Sample Number	Mean IQ
Strongly agree	(48)	90	(21)	97
Agree	(85)	89	(53)	95
Undecided	(106)	100	(89)	98
Disagree	(205)	102	(202)	103
Strongly disagree	(219)	107	(164)	103

Table 20. A covariance analysis of eighth-grade Henmon-Nelson IQ test scores of the seventh-grade sample (N=345)

Source of Variation	Zero-order Relation	Partial Regression	Per cent of Variance
Anomie			5%
High	-8.7	-3.9	
Low	+3.0	+1.3	
Fatalism	+5.1	+1.3	3
Ambition	+6.3	+1.4	4
Perception of unemployment	+4.8	+0.6*	1*
Anticipation of discrimination			3
Yes	-4.8	-1.6	
No	+3.6	+1.2	
Educational aspirations			3
High school, apprenticeship, or less	-10.7	-3.4	
Some college, junior college, or trade	-2.4	+0.7	
College graduation	+3.7	+0.8	
Teacher expectations			6
Excellent	+7.6	+4.4	
Moderate	-0.6	-0.7	
Poor	-8.3	-3.5	
Academic quality of elementary school	+7.8	+2.4	8
Sport among peers			2
Approve	+1.7	+0.5	
Disapprove	-8.0	-2.3	
Time spent with peers			1
None at all	-2.6	+6.3	
1-4 hours	-0.9	-0.8	
5-8 hours	+7.9	+2.9	
9 or more hours	+1.4	+1.1	
Respect for peer group			4
In all or some ways	+1.4	+0.7	
No (or no friends)	-12.2	-5.7	
Teachers' evaluation of peers			3
Approve	+3.3	+1.4	
Disapprove	-4.6	-2.0	
Commitment to parental goals	+6.2	+2.1	6
Closeness to father			1*
Close	+2.0	+0.3*	
Not close	-4.8	-0.8*	
Travel			3
Bay Area	-17.5	-6.1	
Outside	+1.0	+0.3	
Objects in home	+5.8	+1.7	4
Father's education			1
Less than high school	-5.0	+1.4	
High school or junior college	-1.1	-1.4	
College	+7.3	+1.3	
Number of siblings	-3.2	-0.2*	0*
Occupational status			0*
Professional and managerial	+6.0	-1.3*	
White collar	+4.1	+1.2*	
Working (journeyman and semi-skilled)	-0.7	-0.3*	
Lower (unskilled, unemployed)	-7.1	+0.1*	
Race			2*
Black	-12.0	-1.4*	
White	+3.0	+0.4*	
Total (R=.76)			58%

*Not statistically significant.

Table 21. A covariance analysis of eleventh-grade Henmon-Nelson IQ test scores of the tenth-grade sample (N=222)

Source of Variation	Zero-order Relation	Partial Regression	Per cent of Variance
Anomie			0%
High	-1.5	-1.6	
Low	+0.5	+0.5	
Fatalism	+3.2	+1.2	2
Ambition	+1.5	+0.3*	0*
Perception of unemployment	+1.7	+0.2*	0*
Anticipation of discrimination			1
Yes	-6.0	-1.5	
No	+1.6	+0.4	
Educational aspirations			10
High school, apprenticeship, or less	-7.7	-1.8	
Some college, junior college, or trade	-9.2	-5.1	
College graduation	+4.4	+2.2	
Teacher expectations			11
Excellent	+10.3	+6.0	
Moderate	-2.6	-1.5	
Poor	-11.0	-6.6	
Academic quality of elementary school	+5.2	+1.4	4
Sport among peers			2
Approve	-9.1	-5.3	
Disapprove	+0.9	+0.5	
Time spent with peers			2
None at all	-19.1	-13.5	
1-4 hours	-0.4	-0.1	
5-8 hours	+2.9	+1.6	
9 or more hours	-1.1	-1.1	
Respect for peer group			1*
In all or some ways	+1.2	+0.3*	
No (or no friends)	-6.4	-1.4*	
Teachers' evaluation of peers			0*
Approve	+1.0	+0.2*	
Disapprove	-2.2	-0.4*	
Commitment to parental goals	-0.1	-1.8	0
Closeness to father			1
Close	+1.4	+0.4	
Not close	-4.7	-1.6	
Travel			0*
Bay Area	-5.5	-0.9*	
Outside	+0.3	+0.0*	
Objects in home	+4.0	+0.5*	1*
Father's education			13
Less than high school	-6.6	-3.1	
High school or junior college	-1.2	-1.2	
College	+12.4	+7.5	
Number of siblings	-3.2	-1.6	2
Occupational status			1*
Professional or managerial	+9.6	+0.3*	
White collar	-0.3	+0.1*	
Working (journeyman and semi-skilled)	-1.4	+0.0*	
Lower (unskilled, unemployed)	-8.1	-0.7*	
Race			1*
Black	-12.7	-1.6*	
White	+1.5	+0.2	
Total (R=.73)			53%

*Not statistically significant.